

CLAIM AMENDMENTS

Claims 1-60 (canceled)

Claim 61: (New) An integrated biochip system for sample preparation or analysis, comprising one or more chips,

wherein at least one of said one or more chips is a multiple force chip, wherein said multiple force chip comprises multiple functional elements in different layers;

further wherein said integrated biochip system can perform two or more sequential tasks, wherein at least one of said two or more sequential tasks is a processing task.

Claim 62: (New) The integrated biochip system of claim 61, wherein said multiple force chip comprises at least one acoustic element.

Claim 63: (New) The integrated biochip system of claim 61, wherein said multiple force chip comprises at least one electromagnetic element.

Claim 64: (New) The integrated biochip system of claim 61, wherein said multiple force chip comprises at least one electrode.

Claim 65: (New) The integrated biochip system of claim 64, wherein said multiple force chip comprises a traveling wave dielectrophoresis electrode array layer.

Claim 66: (New) The integrated biochip system of claim 61, wherein said multiple force chip comprises a particle switch layer.

Claim 67: (New) The integrated biochip system of claim 61, further comprising at least one chamber.

Claim 68: (New) The integrated biochip system of claim 61, wherein one or more sample components can be moved from at least one area of at least one chip of said system to at least one other area of said at least one chip of said system by traveling wave dielectrophoresis.

Claim 69: (New) The integrated biochip system of claim 61, wherein one or more sample components can be moved from at least one area of at least one chip of said system to at least one other area of said at least one chip of said system by traveling wave magnetophoresis.

Claim 70: (New) The integrated biochip system of claim 61, wherein a sample applied to said integrated biochip system can remain continuously within said system from the beginning of the first of said two or more sequential tasks until the end of the last of said two or more sequential tasks performed by said system.

Claim 71: (New) The integrated biochip system of claim 70, wherein said integrated biochip system is automated.

Claim 72: (New) The integrated biochip system of claim 61, comprising more than one chip.

Claim 73: (New) An integrated biochip system for sample preparation or analysis, comprising two or more chips,

wherein at least one of said two or more chips is a multiple force chip comprising multiple functional elements in different layers, further wherein said integrated biochip system can perform two or more sequential tasks, wherein at least one of said two or more sequential tasks is a processing task;

further wherein at least two of said two or more chips can be, for at least a part of the time during the operation of said integrated biochip system, in fluid communication with one another.

Claim 74: (New) The integrated biochip system of claim 73,

wherein one or more sample components can be moved from at least one of said two or more chips to at least one other of said two or more chips by a mechanism other than fluid flow.

Claim 75: (New) The integrated biochip system of claim 74, wherein sample components can be moved from at least one of said two or more chips to at least one other of said two or more chips by traveling wave dielectrophoresis or traveling wave magnetophoresis.

Claim 76: (New) The integrated biochip system of claim 73, wherein at least one of said two or more chips is a passive chip.

Claim 77: (New) The integrated biochip system of claim 73, wherein at least two of said two or more chips are active chips.

Claim 78: (New) The integrated biochip system of claim 77, wherein at least one of said active chips is a particle switch chip.